Horticulture Tips
May 2007

Oklahoma Cooperative Extension Service
Division of Agricultural Sciences and Natural Resources
Oklahoma State University

GARDEN TIPS FOR MAY!

David Hillock

Trees and Shrubs

- Prune and feed azaleas immediately after blooming.
- Insect Alert: (F-7306)
- Bagworms on juniper and arborvitae. (Late May)
  - Elm leaf beetles and larvae on elms. (Late May)
  - Mimosa webworms on mimosa and honey locust.
  - Lace bugs on sycamore, pyrancantha and azalea.
- Soak new transplants and newly planted trees unless rainfall is abundant.
- Pine needle disease treatments are needed in mid-May. (F-7618)

Turfgrass

- Cool-season lawns can be fertilized again. If you did not fertilize cool-season grasses in March and April, do so now.
- Warm-season lawns may be fertilized again in May. (F-6420)
- Seeding of warm-season grasses such as bermudagrass, buffalograss, zoysiagrass and centipedegrass is best performed in mid-May through the end of June. The soil temperatures are warm enough for germination and adequate growing season is present to promote winter hardiness.
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before ever applying a fungicide. (F-7658)
- Nutsedge plants become visible during this month. Post-emergent treatments are best applied for the first time this month (F-6421). Make certain warm-season grasses have completed green-up.
- The second application of pre-emergent annual grass herbicides can be applied in late-May or early June, depending upon timing of first application (F-6421). Check label for details.
- Vegetative establishment of warm-season grasses can continue. (F-6419)

Flowers

- Annual bedding plants can be set out for summer color.
- Plant summer bulbs such as cannas, dahlias, elephant ear, caladiums and gladiolus.
- Shake a leaf over white paper to look for spider mites. If the tiny specks begin to crawl, mites are present.

Water Gardens

- Clean out water garden and prepare for season. Divide and repot water garden plants.
- Begin feeding fish when water temperatures are over 50°F.

Fruits and Vegetables

- Plant watermelon, cantaloupe, cucumber, eggplant, okra, sweet potatoes, etc.
- Fruit spray programs should be faithfully continued during the next several weeks. (F-7319).
- Late May is the best time to control borers in the orchard. Check for label recommendations and controls.

Some Observations on Freeze Injury

Eric T. Stafne

The Easter freeze event severely impacted a large portion of Oklahoma. Fruit crops were especially hard hit because many were in bloom or just out of bloom. The outlook initially was devastating, and it still is in some portions of the state, but there have been some bright spots to report. It looks as though some pecans will be able to put on a crop. Some cultivars like Kanza with a later budbreak avoided the worst of the cold and will be able to produce a moderate crop. Also, pecan trees at higher elevations seemed to avoid the coldest temperatures and may too produce a crop. Pecan trees with primary shoot damage can produce a crop on secondary buds, but this crop will be very small. The question now is what to do. A small crop may not be worth the economic return to manage it intensively. Therefore, spray and fertilizer regimens could be reduced depending on crop levels. However, trees cannot be neglected altogether because the tree will be setting its crop load for next year this growing season. Irrigation should be kept up if needed and attempts to keep the trees as healthy as possible should be done.

Other fruit trees like apples, peaches and pears were also variable in damage. Many peaches are wiped out, as are apples and pears in some locations. The level of loss depended again on elevation and budbreak timing. Because March was so warm (the 3rd warmest on record for Oklahoma), trees broke bud as much as three weeks earlier than normal. Although there was nothing to be done about this years freeze because it was too cold for too long, in other years where the danger is frost instead of freeze, choosing cultivars with later budbreak may help.

The grape situation has been detailed in my report. There will be some crop on some cultivars in some areas, but we don't expect to see a large crop. Grapes will be scarce this year as many states were impacted. Wineries in Missouri may need to sell their premium wines at double the price they normally charge. I don't know if that will occur here or not, but it bears keeping in mind. Grapes will still need to be managed, even if there is no crop. They will put on too much vegetative growth, growing too much too fast, and therefore weaken the vines ability to prepare adequately for winter. Shoot thinning should be done to minimize out-of-control growth. If you would like the complete report, please contact me for more information.

Small fruits like blackberries and blueberries were also impacted. I have heard that blackberries in Arkansas might be a complete loss. The situation here in Oklahoma is not much better from what I have been able to gather. Blackberries may be able to put on a small fall crop if the season is long enough, but don't count on it. Blueberries are somewhat more cold hardy, but the level of crop will be site specific.

Oklahoma has some extremely variable weather that can negatively impact fruit and nut crops. This is true for all parts of the state. Just because this year the Central and Northeast parts of the state were hardest hit, doesn't mean that next time the freeze won't hit the South and Southwest. If you have reports on damage or injury, I would be grateful to hear from you.

Commercial Soap Products may be Best

David Hillock

Too often we receive calls from disappointed gardeners because they have tried a home remedy they got from a friend or other sources. A study led by scientists at Colorado State University indicated that homemade detergent sprays are slightly toxic to many plants and thus can cause visible leaf damage, delayed maturity and yield reductions when sprayed repeatedly on crops such as tomatoes. Tomato yields when sprayed with commercial soap spray yielded 26 pounds in contrast to tomatoes treated with homemade soap spray, which yielded 14 pounds. Tomatoes treated with water, which was the control, yielded 22 pounds. Commercial Insecticidal soap products are specifically formulated for insect control and go easier on the treated plants. (Source: HortTechnology, April-June 1999, p. 188)

Mulch, Mulch, and More Mulch

David Hillock

Mulch is one of the most common and practical tools a gardener can have. It can be relatively cheap, even free in some cases, come in an array of sizes, shapes and colors, is easy to install, and has many benefits. Benefits of using a mulch, depending on the type used, include: reduced surface evaporation, improved water penetration and air movement, control of soil temperature fluctuations, protection of shallow-rooted plants from freeze damage and frost-heave, improved soil structure and nutrient availability, preventing weed growth, keeping fruits, vegetables, and flowers cleaner, and improved aesthetics of a landscape and addition to property values.

There are two types of mulches, organic and inorganic. Organic mulches include such things as wood and bark chips, straw, grass clippings and seed hulls. Inorganic or inert mulches include polyethylene film, gravel and weed-barrier fabrics.

The ideal mulch does not compact readily. It does not retard water and air movement into the soil, it is not a fire hazard and it breaks down slowly. In addition, the ideal mulch is uniform in color, weed-free, attractive and does not blow away.

<u>Selection</u>

The selection of a mulch should depend on the intended use (Table 2). Appearance is sometimes the goal and either organic or inorganic types would work, but is largely based on personal preferences. When the goal is to improve soil conditions, organic mulches that gradually break down work well. The size of the area in relation to the cost of materials and availability should

also be considered (Table 1). If the area is used primarily for annual flowers, it often is more practical to use a temporary organic mulch that can be turned under each fall.

When to Apply Mulches

A mulch is frequently applied soon after the emergence of the crop seedlings or following transplanting. A delay in application of mulch may be desirable if the soil has not warmed sufficiently during the spring.

Mulches used to enhance appearance and control weeds may be applied at any time.

If the mulch will be used to protect fall transplants by keeping soil temperatures above freezing longer into the fall (permitting better root growth), apply soon after transplanting.

If the mulch is to be used to reduce frost-heave and delay spring growth, apply after the ground has frozen. This type of mulch often is used to protect small bulbs such as squill and crocus and to prevent early emergence.

Depth of Mulches

Except where polyethylene film is used alone or in combination with chips, stones or other material, apply most mulches to a depth of 3 to 4 inches. Apply straw, dried leaves and similar materials to a depth of at least 6 inches.

Some mulches, particularly straw and loose leaves, may harbor rodents. When using these mulches, do not place closer than 6 inches to the base of woody plants. When these types of mulches are placed next to the plant, rodents living in the mulch will chew the bark of the plants, girdling and killing them.

Preventing Nitrogen Deficiency

As organic mulches decompose, the breakdown organisms use some of the soil nitrogen in contact with the mulch. Consequently, nitrogen deficiency may occur. A sign of nitrogen deficiency is a yellowing, primarily of the lower leaves. When this occurs, add nitrogen fertilizers.

For every 100 square-feet of mulched area, add 2 pounds of a complete fertilizer, such as 10-6-4 or one-fourth pound of ammonium nitrate.

Never use a weed-and-feed type of fertilizer in mulched areas.

Table 1: Area covered to a given depth by one cubic yard of mulch.

Area	Depth of mulch
80 square feet	4 inches
100 square feet	3 inches
160 square feet	2 inches
325 square feet	1 inch

Table 2: Types of mulches and their advantages and disadvantages.

Mulch type	Advantages	Disadvantages	General Comments
Organic Mulches			
Cocoa-bean hulls	Long lasting, dark brown color.	Compacts and forms a crusty surface. Harmless if stirred to break crust. Expensive.	Molds may form on surface.
Grass clippings	Readily available.	Must be applied loosely and in thin layers to reduce matting.	Allow grass to dry before applying as a mulch.
Leaves (composted)	Readily available.	Not very attractive. May become matted.	Good soil amendment.
Leaves (fresh dried)	Readily available.	Not very attractive. May blow away. Fire hazard. Wet leaves compact into slimy mats.	Most appropriate in naturalized gardens or shrub masses.
Newspaper	Readily available.	Don't use color inserts or red ink.	Use 3 to 6 sheets thick and cover with organic mulches.
Peat (sphagnum)	Usually available in bulk amounts.	May crust on surface. May blow away.	The only acid-forming peat, but even this is variable with source. Best used as a soil amendment, not as a mulch.
Pine needles	Attractive. Do not compact.	Difficult to obtain in quantity. Can be a fire hazard.	Best for winter protection of fall-transplanted material.
Shredded bark, bark chips, chunk bark	Long-lasting, attractive (chips more attractive than fine shreds).	Cost relatively high. Shredded bark may compact.	Use for informal walkways.
Straw	Readily available.	Blows easily. Highly flammable. Weed seeds often present.	Best used as a temporary mulch around plants needing protection in winter. Anchor with wire mesh.
Wood chips, shavings, pole peelings, recycled shingles.	Long lasting. Readily available.	Texture and color not uniform.	Rustic but usually attractive. Will not compact readily.
Inorganic, inert mulches			
Weed-barrier fabrics	Reduces weeds. Allows air and water penetration. Long lasting if covered with mulch. Easy to apply.	Some may be costly. Most deteriorate in sunlight unless covered with another mulch material such as wood chips.	A good substitute for black plastics.
Gravel, stone.	Available in colors to match or complement the architecture.	Inexpensive. Will not prevent growth of some weedy grasses.	Use black polyethylene beneath to prevent weeds.

Matching Grants Available for Wildflowers

David Hillock

A wildflower grant program was so successful its first year that a state organization is offering it again.

Kim Shannon, spokesperson for *Color Oklahoma – Sow Some Wild Seeds*, announced that the nonprofit organization will match up to a total of $3,000 in grant requests this year. *Color Oklahoma* will provide $300 to $500 for each qualified applicant.

"If $500 is raised locally, we will match that with $500 for a total of $1,000 for wildflower plantings. Grant recipients are welcome to provide more money, although the additional funds will not be matched," Shannon said.

The program applies only to state highway rights-of-way. The application deadline is May 15; and seeds will be sown in the fall for spring and summer bloom. Eligible applicants include nonprofit groups, businesses, schools and universities, individuals, Indian Nations, civic groups and governmental entities.

Color Oklahoma committee members and the Oklahoma Department of Transportation (ODOT) will help winners with the application, seed selection, purchase and planting.

Last year matching grants of up to $500 were awarded to Riverfield Country Day School in Tulsa, Let Turley Bloom in Tulsa County, Choctaw County Arts Council and Iris Garden Club, the City of Edmond, Hennessey 2010 Beautification Committee, Piedmont Kiwanis Club and Lawton Beautiful.

Color Oklahoma, a project of the Oklahoma Native Plant Society, was created in 2002 to beautify the state with native wildflowers and to educate the public about their historical, ecological, aesthetic and economical importance.

Funds are raised from donations and sales of a state *Color Oklahoma* license plate. In addition to buying seeds, *Color Oklahoma* purchased a drill seeder for the Transportation Department, which maintains highway rights-of-way.

Grants can be used for the purchase of native wildflower seeds only. Grant recipients will choose the sites for sowing and ODOT crews will sow the seeds.

Instructions and application forms are available at www.coloroklahoma.org. Questions may be addressed to Ron Tyrl at 405-747-9558.

Oklahoma Native Plant Society
Color Oklahoma
c/o Tulsa Garden Center
2435 S. Peoria Ave.
Tulsa, OK 74114

Lane Center Field Day

Jim Shrefler

The Lane Agriculture Center Annual Field Day will be held Saturday, June 9, 2007 from 9 a.m. until 3 p.m. The Center is operated by Oklahoma State University and the United States Department of Agriculture and is charged with conducting research and public outreach on agricultural technology for southeast Oklahoma and the surrounding region. The Field Day event is open to the public and will provide an opportunity for those attending to learn about new developments with topics such as vegetable production, biofuel and biofumigant crops, weed, insect and disease control and production practices for certified organic vegetable production. Examples of work to be presented at the Field Day are as follows:

- Vegetable crops for the Oklahoma Farm to School Program – Variety trials with tomatoes and carrots are being evaluated for suitability production by local farmers that could be used in Oklahoma School foodservice. Approximately 90 varieties of "bite size" tomatoes are being grown this year to evaluate productivity, size and other characteristics. Similarly, 16 carrot varieties were planted to evaluate productivity and flavor.

- Biofuel and biofumigant crops – Crops such as White Mustard and Canola show potential for use as biofuels and for use as crops that can be used as "fumigants" that can protect other crops from soil-born plant pathogens. Research is underway to evaluate the effectiveness of the biofumigant properties and to develop cultural practices for growing these alternative crops.

- Organic Vegetable Crop Production Systems – 2007 marks the 4th year of a four year demonstration of the organic production of sweet corn, watermelon, southern pea and tomato. These crops are grown on a portion of the Center's farm that is Certified Organic. Field Day attendees will have the opportunity to learn about the practices used to grow these crops, fertilize, and control insect, disease and weed pests.

In addition to the educational aspects of the Field Day, the event will include food, entertainment and opportunity to visit with the Center staff. An antique tractor show and competition is open to all who want to bring their favorite tractor along. The event includes a barrel role, tractor pull and a "slow race"

For more information, call 580-889-7343 or check the website at www.lane-ag.org.

MASTER GARDENER CORNER

David Hillock

The 2007 Oklahoma Master Gardener Continued Training Summer Conference is just around the corner, June 7-8! Program and Registration packets should have arrived in your mailboxes a couple weeks ago. Conference registration will be $45.00. Information regarding the conference can also be found at http://www.hortla.okstate.edu/mgardener/.

A preconference social will be held on Thursday, June 7, 6:00 – 8:00 p.m. at the Will Rogers Museum in Claremore for those arriving early. Rogers County Master Gardeners invite you to a wine and cheese reception featuring some of their local dairies and wineries. Held on the beautiful grounds of the Will Rogers Memorial, the reception includes exclusive touring of the museum at your leisure and provides you with the opportunity to learn more about the life and times of Will Rogers as well as a look at life in the good ole' USA during the early twentieth century. Please join us as we visit with statewide Master Gardeners and learn a little history about all of our Master Gardener groups. Be sure to check the box on the registration form if you plan to attend. Attendance to the preconference social is free, but we need to know how many are coming to plan accordingly.

Hope to see you all there! To learn more about the conference contact David Hillock, Master Gardener Coordinator, Oklahoma State University, Department of Horticulture & Landscape Architecture, 360 Ag Hall, Stillwater, OK 74078. E-mail: david.hillock@okstate.edu; phone: 405-744-5158 or visit the above listed web site.

Upcoming Horticulture Events

Oklahoma Gardening Summer Gardenfest
June 9, 2007, OSU Botanical Garden, Stillwater

Greenhouse Production Short Course
June 27-28, 2007, OSU-Oklahoma City

Mark your calendars now for the Oklahoma Greenhouse Growers' Association's Greenhouse Production Short Course at OSU-Oklahoma City. This event, organized by Oklahoma green professionals and university personnel, is designed to meet the needs of both seasoned as well as novice growers. Topics relevant to retailers will also be discussed. For more information, contact Mike Schnelle at 405-744-7361 or mike.schnelle@okstate.edu.

Native American Horticulture Conference
August 21, 2007, Stillwater

For more information, contact Mike Schnelle at 405-744-7361 or mike.schnelle@okstate.edu.

OSU Turfgrass, Nursery and Landscape Field Day
September 12, 2007, OSU Botanical Garden

Plant Materials Conference
October 9-10, 2007, Stillwater

This workshop will feature speakers lecturing on both herbaceous and woody ornamental species. Both native and non-native plant materials will be presented. For more information, contact Mike Schnelle at 405-744-7361 or mike.schnelle@okstate.edu.

Tree Care Workshop
November 7, 2007, OSU Botanical Garden, Stillwater

University personnel at OSU-Stillwater will host a tree care workshop designed for arborists, horticulturalists, urban foresters and other allied professionals. The workshop will be taught primarily indoors with afternoon laboratories offered at the OSU Botanical Garden. For more information, contact Mike Schnelle at 405-744-7361 or mike.schnelle@okstate.edu.

62nd Annual Oklahoma Turf Conference & Trade Show
November 13-15, 2007, Watkins Center, OSU-Stillwater

For more information about upcoming events, please contact Stephanie Larimer at 405-744-5404 or stephanie.larimer@okstate.edu.